AMENDMENTS TO THE CLAIMS

1. **(Currently amended)** Test equipment of engine motoring comprising:

a conveying mechanism that carries in and carries out an engine to and from a test position;

a fixing mechanism that fixes the engine carried into the test position;

a coupling mechanism ~~that~~ configured so as to directly ~~couples~~ couple an electrical motor to a crank shaft of the engine and ~~can~~ to detect a drive torque;

an encoder that generates a pulse signal as an operating standard in synchronism with rotation of the electrical motor;

a plurality of detection units that are driven to reciprocate so as to be connected to and disconnected from or approach and separate from the engine positioned at the test position and detect a plurality of operating state quantities;

a control means for controlling operations of the electrical motor, the conveying mechanism, the fixing mechanism, the coupling mechanism, and the plurality of detection units; ~~and~~

a judging means for judging whether the engine is normal by comparing information obtained by the plurality of detection units with standard information obtained in ~~advance.~~ advance; and

a base that holds the electrical motor and the coupling mechanism and supports the conveying mechanism;

wherein the base is provided with a frame formed into a gate shape that opens in the conveying direction of the conveying mechanism and covers both sides and a top of the engine at the test position; and

wherein the plurality of detection units are supported on the frame.

2. **(Original)** The test equipment of engine motoring as set forth in Claim 1, wherein

for an engine to be carried-in by the conveying mechanism, ID data for identifying the engine is set, and

the control means sets a test mode of the engine based on the ID data.

3. **(Cancelled)**

4. **(Original)** The test equipment of engine motoring as set forth in Claim 1, wherein

the plurality of detection units detect at least two operating state quantities among an intake pressure, an exhaust pressure, a pressure of a lubricating oil, a temperature of the lubricating oil, a vibration level, a rotation phase of a crank shaft, and electrical characteristics of an ignition system in an engine during motoring.

5. **(Original)** The test equipment of engine motoring as set forth in Claim 4, wherein

each of the plurality of detection units includes a detector that detects an operating state quantity of an engine positioned at the test position, and a drive mechanism that drives reciprocatively the detector so as to connect to and disconnect from or make the detector approach and separate from an inspecting portion of the engine.

6. **(Currently amended)** The test equipment of engine motoring as set forth in Claim 4, wherein

the plurality of detection units include an intake pressure detection unit that detects an intake pressure, and

the intake pressure detection unit includes a connecting pipe ~~that is able~~ configured so as to be connected to and disconnected from an intake pipe of the engine, and a pressing rod ~~that opens~~ configured so as to open a throttle valve disposed inside the intake pipe when the connecting pipe is connected to the intake pipe of the engine.

7. **(Currently amended)** The test equipment of engine motoring as set forth in Claim 4, wherein

the plurality of detection units include an exhaust pressure detection unit that detects an exhaust pressure, and

the exhaust pressure detection unit includes an exhaust pipe that guides air exhausted from the engine, a throttle portion provided inside the exhaust pipe, and a detector that is disposed ~~at a more~~ further upstream ~~side~~ than the throttle portion and detects an exhaust pressure.

8. (Original) The test equipment of engine motoring as set forth in Claim 4, wherein

the plurality of detection units includes an electrical characteristic detection unit that detects electrical characteristics of an ignition system, and

the electrical characteristic detection unit includes a connector that is connected to the ignition system of the engine and conducts a current, and a detector that detects a voltage characteristic generated in the ignition system according to current conduction.

9. (Original) The test equipment of engine motoring as set forth in Claim 1, further comprising:

a detection unit that detects at least one state quantity among an oil filter temperature of an engine, and a noise level, an atmosphere temperature, an atmosphere humidity, and an outside air pressure around the engine during motoring.

10. (Original) The test equipment of engine motoring as set forth in Claim 9, wherein

the detection unit includes an oil filter temperature detection unit that detects an oil filter temperature of the engine, and

the oil filter temperature detection unit includes a non-contact type detector that detects an oil filter temperature from an outside thereof.

11. (Previously presented) The test equipment of engine motoring as set forth in Claim 1, wherein

the fixing mechanism includes a clamper that clamps a flange portion formed on a cylinder block of the engine.

12. (Previously presented) The test equipment of engine motoring as set forth in Claim 1, wherein

the coupling mechanism includes a plurality of coupling fingers that are swingably driven so as to engage with a ring gear directly fixed to the crank shaft of the engine and rotate together with the electrical motor.